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Input/Output Machines

PROBLEM 1: INPUT/OUTPUT

Machine **1** takes an input x and produces an output y according to the following pattern:



Each input x is multiplied by 3 to get the output y .

- a) Input $x = 2$; Output $y = ?$
- b) Input $x = 5$; Output $y = ?$

Input x	Output y
2	
5	

Write a rule for Machine **1**.
 If the input is x , then the output is $3x$.

PROBLEM 2

Machine **2** takes an input x and produces an output y according to the following pattern:

a)



Input x	Output y
2	
5	

b)



Input x	Output y
2	
5	

a) Write a rule for Machine **2**.
 If the input is x , then the output is $2x + 1$.

b) Write a rule for Machine **2**.

c) Write a rule for Machine **2**.

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